SECTION 2.6

TRINITY RIVER WATERSHED MANAGEMENT AREA

The following draws upon information obtained through public input, agency contacts, and the personal experience of Regional Water Board staff. What is presented in this document is a summary of our knowledge regarding water quality issues and the existing and planned actions at this date in time based on current Regional Water Board staff knowledge. The USEPA developed and adopted a TMDL for sediment in the South Fork Trinity River in 1998. Implementation of that TMDL is dependent on funding at the Regional Board level. At this point, there is not sufficient funding for the Regional Board to develop an implementation plan to accompany the TMDL, nor to accomplish any hillslope or in-stream monitoring of watershed streams. The Regional Board is in the process of developing a region-wide TMDL sediment implementation plan that will be modified for each watershed that has a TMDL for sediment. This implementation will become a Basin Plan Amendment for control of sediment discharges. The remainder of the Trinity River watershed (Upper, Middle and Lower) is scheduled for sediment TMDL adoption by USEPA in December 2001.

MANAGEMENT AREA DESCRIPTION

General Description

The Trinity River, a wild and scenic river located in northwestern California, is the largest tributary to the Klamath River. Its basin drains an area of about 2900 square miles of mountainous terrain, with its headwater streams originating in the Klamath and Coast Ranges. From its headwaters, the river flows 172 miles south and west through Trinity County, then north through Humboldt County and the Hoopa Valley and Yurok Indian reservations. The confluence with Klamath River at Weitchpec is about 43 miles upstream from the Pacific Ocean. In the early 1950's two major water-development features: Lewiston Dam and its reservoir and related facilities and Trinity Dam and its reservoir, known as Trinity Lake, which are jointly known as the Trinity River Division of the Bureau of Reclamation's Central Valley Project (CVP) were installed above River-Mile 112 and the community of Lewiston. Water stored and released from the Trinity Dam reservoir is used for power-generation and diverted to out-of-Basin multiple uses throughout the Central Valley of California.

Lewiston Dam is, since installation of the Trinity River Division (TRD) works, the uppermost limit of natural salmon and steelhead fish-migration. A fish hatchery and rearing facilities were constructed and operate, as part of the TRD, to mitigate for the loss of upstream habitat. Trinity Lake has been stocked with a variety of non-native fish, including warmwater, Smallmouth and Largemouth bass and Kokanee (landlocked Sockeye salmon). Trinity River downstream of TRD is habitat for not only the anadromous salmonids and other native species, but also has populations of Brown trout.

The public lands that adjoin the TRD facilities are managed for multiple uses as part of the Whiskeytown-Shasta-Trinity National Recreation Area; those in upper portions of the basin are managed as components of the US Shasta-Trinity and Six Rivers National Forests. Private timberlands, ranches and residential properties are mostly near the Highway 3-Highway 299 corridors in the southeastern part of the basin. The Hoopa Valley Reservation occupies about 170 square miles on both sides of the lowest 15 miles of the river.

This WMA is mostly rural with human population centered near Trinity Center, Weaverville, Lewiston, Hayfork and Hyampom. The only large-scale agriculture is cattle grazing. Timber harvest continues but at a much reduced level than in the past on Federal lands. However, the

Figure 2.6.1. Trinity River WMA

intensity and scope of logging appears to be increasing in private lands. Toxicity concerns center around acid mine drainage (AMD) from abandoned mines and past mining activities, sediment release from subdivision development and eroded roads in areas with unstable soil and decomposed granite (DG), septic tank use, aboveground and underground tanks, and lumber mills. The U.S. Forest Service and the Bureau of Land Management federally manage approximately 80 percent of the land in the Trinity WMA. Of the remaining 20 percent of the basin, which is privately owned, approximately half are industrial timberlands. Old existing access roads that are not maintained or properly decommissioned are a continual source of sedimentation into the Trinity River and its tributaries. Tourism including rafting, especially on the lakes, is part of the economy of this area.

Geology

The western portion of the Trinity WMA is underlain by rocks of the Franciscan Complex within the Coast Ranges Geologic Province. The eastern portion of the Trinity WMA is underlain by rocks belonging to the Klamath Mountains Geologic Province. Geologic and topographic structure within the Trinity WMA is generally controlled by several northwest trending faults. Elevations range from 9,000 feet in the Trinity Alps to 250 feet at the confluence of the Trinity and Klamath Rivers near Weitchpec. Rock types include sedimentary and volcanic-both of which are highly metamorphosed locally, and intrusive rocks ranging from ultra basic to granitic. Much of the Trinity WMA is prone to seismically induced landslides due to rapid ground acceleration from local and coastal seismic activity, especially during winter months when slope soils are saturated. Additional slope stability hazards include active landslides, dormant landslides with the potential for re-activation, and soil creep. Key unstable areas include the South Fork Trinity watershed, steep canyon lands along the main fork of the Trinity River, Grass Valley Creek, and lands on the west side of Trinity Lake. In addition, valley inner gorges, which are those over steepened slopes adjacent to stream courses, are considered highly unstable. These inner gorges, formed through mass wasting in response to channel down cutting and stream bank undercutting, occur commonly throughout most of the Trinity WMA. Ground water resources are relatively plentiful throughout the geologic systems, but are not well defined.

Most of the soils are developed from peridotite. Both acid and basic igneous rocks form the remaining soils. The latter soils are slightly more stable and productive than the peridotite soils. Areas underlain by peridotite are considered potentially unstable.

Areas of granitic soils are productive but highly erosive. A typical example of these soils is the Shasta Bolly Batholith in the upper Grass Valley watershed that consists of a deeply weathered granitic rock that breaks down to decomposed granite. Soils in the hillside areas are characterized as slopewash overlying weathered quartz diorite with an abundance of small slumps. Soils derived from granitic rocks are sandy and have no profile development. Thus, erosion hazards are high when soils are disturbed and parent material (weathered quartz diorite) is exposed. Mineral potential is considered good for asbestos, chrome and cinnabar. In the past gold mining has been pursued.

Vegetation

The highest elevations of the Trinity WMA are steep, treeless mountains. Below about six thousand feet elevation the landscape is dominated by mixed conifer forests with some Red Fir and Douglas Fir stands with some hardwoods present. The lower elevations contain complex riparian vegetation, evergreen brush and some rangeland and chaparral.

Water quantity and quality regimes. Annual precipitation averages 57 inches/year with a low of 37 inches in Weaverville and Hayfork and a higher rainfall of 75 inches in trinity center and 85 inches in the Hoopa Mountains. On a year-to-year basis in the basin rainfall is, highly variable; the driest recorded water year (1977) provided less that one-tenth the wettest (1983) year of record. There are

occasional summer thunderstorms that produce extensive runoff to streams and the river and can set off wild fires. The TRD project, since its completion in 1965, has diverted a majority (ranging from about 65% to about 90%) of the upper-basin's yield at Lewiston. This diversion supplements the water resources of the Sacramento River watershed and generates significant hydroelectric power assets for the CVP.

The quality of water in the basin ranges from the highest-quality pristine waters that emerge from the Trinity alps wilderness into the north-of-mainstem tributaries, to various degrees of human-caused impairment in the mainstem and southern tributaries. Logging, road construction and associated activities are recognized as sources of stream-impairing sediments and related summertime water temperature extremes. The hydrologic changes wrought by the TRD project and the geologic conditions of the basin have resulted in altered stream-channel conditions and fish habitats for many miles below Lewiston. These conditions and the precipitous drop in salmon and steelhead populations, which followed completion of the TRD projects in 1965, are commanding attention by US Congress, Secretary of Interior, Bureau of Reclamation, Native American tribes, and a broad collection of stakeholders (such as the Trinity River Task Force, Trinity County, and the South Fork Trinity CRMP).

PROBLEM IDENTIFICATION AND ASSESSMENT

Seven sub-basins are recognized in the Trinity WMA.

North Fork Trinity River

The North Fork Trinity River is a largely undeveloped 10,145-acre forested watershed that drains into the main Trinity River near the community of Helena. Most of this area is designated as wilderness and therefore, little timber harvesting is conducted. A portion of the North Fork is designated as a wild and scenic river, and is refugia for summer steelhead. The watershed was hydraulically mined during the California Gold Rush and the Great Depression. Some mining still takes place in the lower part of the watershed), however an assessment of the old and current mining sites on public lands remains to be conducted. Wild fires are also of concern in this subwatershed.

New River

The New River is a largely undeveloped 47,472-acre forested watershed that drains into the main Trinity River near the community of Hawkins Bar. Approximately half of the area is designated as wilderness and half as U.S. Forest Service land. The New River is designated as a wild and scenic river and is refugia for summer steelhead. The watershed was hydraulically mined during the California Gold Rush and the Great Depression. Some mining still takes place, however an assessment of the old and current mining sites on public lands remains to be conducted. There is a history of lightening-caused wild fires in the area. For example, in 1999 the "Big Bar Complex Fire" burned approximately 140,00 acres in New River, Tish Tang, Horse Linto, Red Cap, and Mill Creek drainages, with over 150 miles of fireline constructed and subsequent salvage logging. On the Forest Service land there are limited timber sales and roads that contribute to erosion and sedimentation. Logging generally takes place on the "Matrix" lands as designated in the Northwest Forest Plan. Matrix lands are defined as federal lands outside of reserves and withdrawn areas. A burnt dump at Denny was operated for years and closed. It needs to be investigated and assessed for hazardous materials and impacts on water quality.

Lower Trinity/Humboldt Section

This portion of the Trinity River is designated as a wild and scenic river. This area has experienced hydraulic mining in the past. Current mine practices consist of small placer sluicing and hard rock milling operations. An assessment of abandoned mines, past and present mining activities needs to be conducted. A formal inventory needs to be compiled with exploratory site information on the

disposition of acid mine drainage, sedimentation, waste handling and remediation as appropriate, to meet long-term water quality standards.

The Hoopa Tribe's governing body, The Hoopa Valley Tribal Council, has been recognized by the United States with sovereignty similar to that of a State. One element of that sovereignty is the Tribe's authority and duty to administer the Clean Water Act (CWA) within its reservation's borders. Trinity River flows across the southern border of the Tribal land and remains within the Tribe's jurisdiction until the confluence with Klamath River. The Tribe has prepared and adopted its CWA-based Water Quality Management Plan and submitted it to US EPA for review and approval. The tribe conducts timber harvesting without state or federal oversight. Logging in the Lower Trinity by private industry is moderate.

There are several contaminated sites in the area. The Copper Bluff Mine continues to emit toxins. Celtor chemical works, located on the Hoopa Valley Reservation, is a US EPA Superfund site. A remedial action plan has been implemented. Twelve sites are being investigated in the Hoopa/Willow Creek area where known releases from underground storage tanks occurred. A possible release from underground fuel tanks located at a closed gas station in Salyer needs to be investigated. There are PG&E electrical substations in Hoopa and Willow Creek. These are being investigated for historic releases of mineral oil that may have contained PCB's. Storm water discharges from these facilities are also being investigated. An unknown number of aboveground storage tanks exist in the area. There are also a number of lumber mills (such as the Burnt Ranch Mill) that have a history of using wood preservatives including pentcholorophenol that may be the source of soil and groundwater contamination. These sites need to be investigated. A burn dump at Burnt Ranch was operated for years and closed. It needs to be investigated and assessed for hazardous materials and impacts on water quality.

Canyon Area

This portion of the Trinity River is designated as a wild and scenic river. The Canyon Area lies along both sides of the mainstem from Junction City west to the Trinity/Humboldt County line. Most of this area is under the jurisdiction of the U.S. Forest Service. The flow of the river keeps sediment from depositing on the streambed. Along this corridor there are homes, mills, the ranger station and Highway 299. Timber harvest is limited. But there are chronic landslides that block the highway and create the problem of soils deposition. Logging and roads create erosion hazards and potential sedimentation to the streams and the river. This area has experienced placer and hydraulic mining in the past. A burn dump at Big Bar was operated for years and closed. It needs to be investigated and assessed for hazardous materials and impacts on water quality. The Trinity River Task Force is modifying the stream channel to lay back the banks. This requires a section 404 permit from the Army Corps of Engineers, a section 401 Water Quality certification from the Regional Board, and compliance with the General Construction Storm Water Permit provisions.

Weaverville Area

This area extends from Junction City to the Lewiston Dam and is the area of highest human population in the Trinity WMA (Weaverville). The terrain in this area is relatively flat and as such is an area of deposition. Logging operations and road building and use have caused erosion, sedimentation and elevated turbidity of streams (especially Reading, Browns and Indian Creeks) and the river. One of the principle causes of anadromous fisheries decline is the degradation of spawning riffles and the filling of resting pools with decomposed granite sand. Grass Valley Creek is the major contributor of this sand to the Trinity River, mostly as a result of logging. The Grass Valley Creek watershed encompasses an area of approximately 23,000 acres. Past work and recently construction of Buckhorn Sediment Debris Dam (early 1990's) has helped control the sedimentation of the stream, but it is still a major source of sediment. The BLM has a management plan for their part of Grass

Valley Creek watershed. Access roads associated with construction of Buckhorn Dam were built in areas with raveling DG soil. These roads need to be inspected for maintenance and erosion control measures of ongoing roadside and upslope slumping.

Twenty-one sites are being investigated in this area where known releases from underground storage tanks occurred. Releases from underground tanks and bulk storage facilities have resulted in significant gasoline contaminant plumes, some containing MtBE, in Weaverville. A possible release from underground fuel tanks located at a closed gas station in Weaverville needs to be investigated. There is a PG&E electrical substation located in Weaverville. This site is being investigated for historic releases of mineral oil that may have contained PCB's. Storm water discharges from this facility are also being investigated. An unknown number of aboveground storage tanks exist in the area. These sites need to be investigated. The possible discharge of wood treatment chemicals from the Trinity River Lumber Co. in Weaverville needs to be evaluated There is a dump one mile up Highway 3 that has been closed and converted to a transfer station. County wide solid waste is collected at the transfer site and hauled out of the area to Anderson Landfill (LF). The Weaverville LF needs final closure plans developed per Chapter 15, Title 27 and assessed for release of hazardous waste to ground water as part of final closure. Burn dumps at Dedrick, Douglas City, and Junction City were operated for years and closed. They need to be investigated and assessed for hazardous materials and impacts on water quality.

Domestic wastes generated by the sewered community of Weaverville is treated and disinfected to secondary levels at the Weaverville Sanitary District POTW. Final effluent is disposed to land. Historically, developed, unincorporated areas are unsewered with onsite disposal systems in marginal soils for subsurface disposal of septic tank effluent. These areas need to be investigated and assessed for compliance with the Individual Disposal System policy.

Upstream of Weaverville (including Trinity and Lewiston Lakes)
This area, about half of which is designated as wilderness area, was hit hard by the 1996-97 floods that delivered massive amounts of sediment to the lakes. It took almost two years for the lakes to recover from this sediment load. The U.S. Forest Service controls the wilderness area where some grazing is still allowed. Logging on both private and U.S. Forest Service land has and is causing erosion and subsequent sedimentation of the streams and lakes. This area has experienced hydraulic mining in the past. Twelve sites are being investigated in this area where known releases from underground storage tanks occurred. The discharge of heavy metals, fuels and wood treatment chemicals from an abandoned mill site near Douglas City is currently under investigation. Trinity and Lewiston Lakes are heavily used for recreational boating and personal watercraft. An investigation concerning releases of fuels and fuel oxygenates, especially MtBE, needs to be conducted. There are resorts and private housing around the lakes that use septic tank systems for wastewater disposal. Similarly, in the Lewiston Valley below Lewiston Dam and downstream along the banks of the Trinity River there are existing RV parks and residential sites with marginal performance of onsite systems and wastewater treatment systems being at hydraulic capacity due to excessive infiltration/inflow to their collection systems. These need to be investigated and assessed for compliance and appropriate enforcement. Burnt dumps at Carrville, Lewiston and Trinity Center were operated for years and closed. They need to be investigated and assessed for hazardous materials and impacts on water quality.

An unknown number of aboveground storage tanks exist in the area. These sites need to be investigated. The Trinity River Diversion not only decreases the amount of water in the system by sending water to the Sacramento Valley and the Central Valley Project, but also creates a temperature elevation problem in the remaining water in the river and disrupts physical cues for migration and spawning of salmon. The Trinity River Fish Hatchery was constructed at the base of Lewiston Dam

to help mitigate the loss of fisheries habitat resulting from the project, but the hatchery has not been effective in sustaining fish populations. [need more info on fish populations]

South Fork Trinity

The South Fork Trinity has not been dammed and is a Key Watershed in the U.S. Forest Service's Northwest Forest Plan. A Key watershed is a watershed with 1) habitat for potentially threatened species or stocks of anadromous salmonids or other potentially threatened fish, or 2) greater than 6 square miles with high quality water and fish habitat (Six River National Forest). The South Fork Trinity is primarily mountainous, forested land, with two broad agricultural valleys occupied by the towns of Hayfork and Hyampton. Elevations in the basin range from more than 7,800 feet above sea level in the headwater areas of the North Yolla Bolly Mountains, to less than 400 feet at the confluence with the Trinity River. This 604,000-acre area which is a mix of private and U.S. Forest Service administered public land, has experienced extensive timber harvesting in the past. The logging operations and road building and use have caused erosion and sedimentation of streams and the river. In addition, the area is susceptible to naturally occurring landslides and other mass- wasting events because of steep terrain, loosely consolidated soils and heavy precipitation. A sediment source analysis determined that sediment delivery to the stream averaged 1,053 tons/mi2/yr over the period 1944-1990. Sixty-four percent of that sediment was from mass wasting. There is a history of wild fires and the subsequent erosion and salvage logging issues. The South Fork Trinity CRMP is very active in this watershed.

Hayfork Creek is the largest tributary to the South Fork and historically has been the spawning area for steelhead and spring and fall chinook salmon. For example, in the South Fork Trinity spring chinook salmon populations have decline by 90 percent. Cattle grazing is the main agricultural activity in the South Fork Trinity subwatershed which has had impacts on soil and stream bank stability and stream sedimentation. The South Fork has been declared impaired by sediment and placed on the CWA 303(d) list, and a TMDL was completed in December 1998 by USEPA. Four other reaches of the mainstem of the Trinity River are also listed as impaired by sediment. These include the reach from the headwaters to Lewiston Reservoir, the reach from Lewiston Reservoir to Junction City, the reach from Junction City to the confluence of the South Fork Trinity, and the reach from the confluence of the South Fork Trinity to the confluence of the Klamath River.

This area, as in the past, has abandoned mines and small placer sluicing and hard rock milling operations that need to be investigated and assessed for release of toxic pollutants and compliance with Basin Plan waster discharge prohibitions and General Storm Water permit provisions for industrial activity. The Kelly Mine on McCovey Gulch in Hayfork has drainage discharges containing chromium and arsenic. Several residences take potable water from McCovey Gulch and Hayfork Creek downstream. The Trinity County Health Department has posted the creek for metals contamination and has notified homeowners not to drink the water.

Fourteen sites where known releases from underground storage tanks occurred are being investigated in this area. In the Hyampom area, several domestic wells were contaminated with MtBE from an underground fuel tank release. There are PG&E electrical substations in Hyampom and Wildwood. These sites are being investigated for historic releases of mineral oil that may have contained PCB's. Storm water discharges from these facilities are also being investigated. An unknown number of aboveground storage tanks exist in the area. These sites need to be investigated. Several former mill sites remain open in the area, and need to be investigated to verify that any threat to water quality has been abated. Burnt dumps at Forest Glen, Hyampom and Wildwood were operated for years and closed. They need to be investigated and assessed for hazardous materials and impacts on water quality. In the Hayfork area the LF needs final closure plans developed per Chapter 15, Title 27 and assessed for release of hazardous waste to ground water as part of final closure.

WATER QUALITY GOALS AND ACTIONS

The Regional Water Board Trinity Watershed Team, composed of staff members familiar with our activities in the WMA, prioritized goals and actions to address issues associated with the goals. The goals and actions, and their priority rankings reflect the desire to address certain issues in a priority fashion. However, the realities of funding constraints and program related priorities may override the priorities developed by the Team. The broad goals for the WMA include improving the anadromous fishery through sediment reductions and habitat enhancements and maintaining the other high beneficial uses of both surface and ground water. The three goals for the Trinity River are related through the beneficial uses they address:

- **GOAL 1: Protect and enhance salmonid resources (COLD, MIGR, SPWN, RARE)**
- **GOAL 2: Protect and enhance ground water resources and attendant beneficial uses**
- **GOAL 3: Protect all other surface water uses**

The protection of cold water fisheries (GOAL 1) requires the protection of surface water (GOAL 3) and ground water (GOAL 2) along with additional concerns for siltation, habitat loss, temperature and low tributary flows. Actions for protecting the beneficial uses for GOAL 1 (COLD) largely serve to protect all other uses, except MUN.

GOAL 1: Protect and enhance salmonid resources (COLD, MIGR, SPWN, RARE)

The anadromous fishery has experienced severe decline in the last 40 years. Most notable is the destruction of fish habitat. Natural events and multiple land uses are responsible to varying degrees for sediment contributions through accelerated erosion and mass wasting and include timber production and harvest, road construction and maintenance, grazing, and gravel mining. Increased water temperatures in some parts of the watershed, are an issue. Additional upslope erosion controls are needed to reduce sediment delivery to waterways in the Trinity watershed. We must promote and develop considerations for the stability of stream channels and maintenance of channel form consistent with a functioning hydrologic channel. The riparian and instream habitat components must be enhanced. Instream temperatures for cold-water habitat and adequate stream flows to protect and enhance salmonid resources and COLD will be managed.

GOAL 2: Protect and enhance ground water resources and attendant beneficial uses

The underground storage tanks and toxics remediation programs are aimed at addressing the issues associated with this goal. While pollution/contamination issues are site specific and localized, ground water in those areas is an important resource and supports beneficial uses.

GOAL 3: Protect all other surface water uses

The actions above for GOAL 1 largely serve to protect all other uses, however additional issues with regard to beneficial use impairment may arise in the future. If issues do arise, we will address them through this process.

IMPLEMENTATION STRATEGY

Institutional Framework

Water Resources-development and Water Quality-protection Programs in the Basin

The Trinity River has water and habitats that are highly valued by two conflicting interests, fisheries and wildlife, and water supplies for human use. The beneficiaries of these resources are the Hoopa, and Yurok Tribes, Pacific coast fisheries users, Trinity River sports fishers, CVP water and hydro-power customers throughout California, local ranchers, residents, rafters, swimmers, and tourists. In the belief that conflicts can and should be resolved via public-agency processes, Congress created the

Trinity River Task Force (TRTF) in 1971. Its mandate is to formulate and implement a management program to restore fish and wildlife populations in the Trinity River Basin. The TRTF seeks to achieve temperature objectives that meet the life cycle needs of the fish. Congress has also funded numerous water-resource and fishery studies and directed that US Secretary of Interior (SOI) require actions by the relevant federal agencies to restore the river's fisheries.

The current status of the TRTF and SOI implementation of the mandates is that the federal government (Secretary of Interior) is currently considering a recent EIR for which the preferred alternative for below the dam is 1) introduction of gravel, 2) removal or flushing of sediment, 3) decreased flow to the Central Valley, and 4) increase flows to the mainstem of the Trinity River. The increased flows will be based on five water-year types (flow into the Trinity Reservoir before April) and could be 255,000 acre-feet per year. The final EIR was approved in November 2000, with the federal Record of Decision at the end of 2000. Trinity County is the lead agency for CEQA and certified the EIR in the summer of 2000. The Regional Water Board will issue 401 water quality certifications for restoration projects and Waste Discharge Requirements for the bank feathering projects. Trinity County may be asking the State Water Board to modify the water right permits held by the Bureau of Reclamation to validate the increased flows and attempt to meet the temperature objectives in the Basin Plan. In addition, four bridges along the river will have to be raised to accommodate the increased flows, but funding for the bridge work has not been appropriated by any agency.

Restoration and habitat enhancement projects in the watershed need to be reviewed for implementation of best management practices (BMPs); and regulated in conformance with these permits to protect water quality objectives and beneficial uses. Those activities which pose a significant threat to water quality will necessitate prescription of waste discharge requirements (Non-Chapter 15 WDR) for protection of water quality objectives and compliance with Basin Plan Waste Discharge Prohibitions. Finally, these types of projects will require staff to investigate and assess the management practices and controls that are being followed to minimize adverse effects to waters from the activities.

Both the Trinity River (mainstem) and the South Fork of the Trinity River have been declared as impaired by sediment and placed on the Clean Water Act section 303(d) list for impaired waters. Pursuant to a consent decree produced in response to a citizen's lawsuit, USEPA has begun establishing Total Maximum Daily Loads (TMDLs) in the Trinity River Basin. The USEPA developed and adopted a TMDL for sediment in the South Fork Trinity River in 1998. Implementation of that TMDL is dependent on funding at the Regional Board level but is currently scheduled for adoption in June 2005. The Regional Board is in the process of developing a region-wide TMDL sediment implementation plan that will be modified for each watershed that has a TMDL for sediment. This region-wide sediment plan will be incorporated into the Basin Plan as an amendment. This Basin Plan Amendment will contain revised prohibition of discharge of controllable sediment from all sources. It will also require landowners (including industry and government) to inventory sediment delivery sites and correct them, and develop land management plans to avoid future erosion. The remainder of the Trinity River watershed is scheduled for sediment TMDL adoption by USEPA in December 2001.

In 1981 the State Water Resources Control Board (SWRCB) established a Management Agency Agreement with the U.S. Forest Service. The SWRCB certified the plan entitled "Water Quality Management for National Forest System Lands in California"(this is essentially the USFS 208 plan), designated USFS as the management agency, and executed the MAA with USFS. This Water Quality Management (WQM) plan sets forth process standards as BMPs and addresses timber management, road and building site construction, mining, recreation, vegetative manipulation, fire suppression and

fuels management, watershed management, and range management. USEPA approved all these actions. Under this agreement the Regional Board waives direct regulation on Forest Service-maintained land except under special conditions. The Regional Board maintains the responsibility of oversight for implementation of the WQM plan. The Forest Service evaluates and monitors BMP implementation. (Similarly, in 1988, SWRCB certified a WQMP for Timber Operations on Nonfederal Lands in California, designated BOF and CDF as joint management agencies, and executed the MAA. USEPA accepted the designation of CDF/BOF, but did not act on the WQM Plan or MAA. Pursuant to Public Resources Code 4514.3, RWQCBs would be generally prohibited from directly regulating nonfederal timber operations if USEPA were to approve this WQM plan. Each WQMP specified additional improvements to be pursued by the management agencies.) USFS developed a Best Management Practice Evaluation Program and began implementation in 1992. (BOF/CDF developed a similar program and began implementation in 1996. Numerous changes in statute and BOF Forest Practice Rules have been made to pursuant the WQM plan for nonfederal lands.)

Under more-conventional circumstances, the Regional Board's mandate for a watershed-based initiative in a basin would be to assess water quality impairments and develop a protection/restoration strategy which regulates degrading factors and promotes protective practices; there would be a "regulated community" and a host of cooperating governmental agencies to implement the strategy. The Trinity is subject to superior powers: The federal Secretary of Interior, the Central Valley Project, the Tribal Trust powers, the State of California's appropriative water rights via the SWRCB and the Hoopa Tribe's sovereign status. This does not follow the conventional model. Their authorities should be employed to protect/restore water quality but they must be exercised in concert with RWQCB's.

SUMMARY OF WATERSHED ACTIVITIES AND NEEDS

Assessment and Monitoring

Assessment of existing information was used in the development of the TMDL strategy. The TRTF has been funding assessment and monitoring activities and will likely continue to do so in the future. Focussed monitoring in the long term will be associated with determining the effectiveness of management practices to reduce erosion and sedimentation and lower temperatures, and determining trends towards the desired future condition. In-stream monitoring will be necessary to keep track of cross-section changes, thalwag profiles, embededness, turbidity, disolved oxygen, gravel quality, riparian function, and fish productivity. Water quality characteristics will be monitored at two permanent stations under the SWAMP: Trinity River at Lewiston and Weitchpec. The intensive survey in FY 2003-04 will provide significantly more information on the WMA. The RCD and CRMP in this WMA are very active, and their help may be the best avenue to collect new data that is not now being collected by others. Also, both the U.S. Forest Service and Bureau of Land Management have local expertise and experience in assessment and monitoring that should be utilized in cooperative efforts. Timber companies are also collecting new data.

The North Coastal Watershed Assessment Program (NCWAP) is currently scheduled to focus on watershed assessment in the WMA in FY 2001-02. That program will gather existing data and collect new data on private and state lands in the WMA. The final product will be an interactive computerized format including the data and watershed assessment.

Education and Outreach

The TMDL process will enhance public and agency participation. Our intent is to improve the recognition of land use impacts on the aquatic environment from nonpoint sources and to foster adaptive management for overall watershed health.

Watershed Coordination
We currently coordinate with local agencies, CRMPs and watershed groups, State and federal agencies on an as-needed basis. Improved coordination is sought as part of the TMDL implementation process, especially with the Division of Water Rights. We also need more coordination with the Trinity River Task Force and the South Fork Trinity CRMP for the TMDL process. The NCWAP also will require more coordination with landowners and agencies in the WMA.

Core Regulatory
The current level of point source regulation (inspection, monitoring, and enforcement) on traditional dischargers is anticipated and covers above ground tanks, underground tanks, Department of Defense sites, waste discharge requirements, NPDES, storm water pollution control, landfills, as well as construction related pollution, gravel management, and placer mining.

Water Quality Certification
The Clean Water Act section 404 permitting (and associated section 401 Water Quality Certification required of the Regional Water Board) have been streamlined significantly for salmonid stream habitat restoration activities that follow the California Department of Fish and Game *California Salmonid Stream Habitat Restoration Manual.* Adequate staff funding is needed to completely implement the 404/401 program. Staff continues to pursue innovative approaches to assure appropriate review and certification of all projects. High priority projects (those with a potential for adverse impacts) will continue to receive a complete review.

Ground water
Ground water issues center on petroleum contamination and will continue to receive the current level of activity. Groundwater and surface water contamination is suspected at former and existing mill sites that historically used wood treatment chemicals. Discharges of pentachlorophenol, polychlorodibenzodioxins, and polychlorodibenzofurans likely occurred with poor containment typically used in historical wood treatment applications. These discharges persist in the environment and accumulate in surface water sediments and the food chain. Additional investigation, sampling and monitoring, and enforcement actions are warranted, but insufficient resources exist to address this historical toxic chemical problem.

Nonpoint Source Program
Continued involvement in forestry, grazing, and county road issues is necessary to ensure protection of aquatic resources. The Regional Board continues implementation of the MAA with U.S. Forest Service for non-timber nonpoint source issues on a very limited basis due to a lack of staff resources. However, this issue is becoming more important as we further evaluate sediment sources in this WMA. The recent listing of coho salmon as threatened under the federal Endangered Species Act has put the spotlight on all land use activities that potentially may increase sedimentation or otherwise affect habitat. The TMDL process will increase work with local agencies and groups regarding land use effects on water quality, following the State Nonpoint Source Pollution Control Program strategy of first emphasizing self-determined implementation of controls to reduce nonpoint source pollution. An outreach program will enhance the effectiveness of the program.

Timber Harvest
We have an extensive Timber Harvest program where staff review and inspect timber harvest plans for implementation of the Forest Practice Rules and best management practices to ensure protection of water quality and beneficial uses. We are expanding our program activities on private land in concert with California Department of Forestry and Fire Protection. We currently have resources to oversee, per the USFS MAA, timber sale activities associated with USFS lands. Non-timber

nonpoint source activities on USFS land are an unfunded need as noted above. We are unable to implement this portion of the USFS MAA except for responding to public complaint issues. This is a significant issue for future oversight by the Regional Board for these activities.

Local Contacts
We will continue active involvement in the Clean Water Act sections 319(h) and 205(j) grant programs, as well as promoting other programs like the California Department of Fish and Game programs.

Water Quality Planning
The Basin Plan review process feeds into the activities to the extent issues were identified in the Triennial Review and applicable to the Trinity WMA. The top priority issues are:

- Review the Nonpoint Source Control Measures
- Adopt an implementation plan for sediment reduction

Additionally, the TMDL strategy will be incorporated into the Basin Plan at some future date.

Evaluation and Feedback
We plan to evaluate the overall effectiveness of the process on a yearly basis, adjusting the activities as appropriate. The final evaluation once the Trinity River TMDL is developed (2001) will feed into the next cycle of assessment and problem identification.

TMDL Category: South Fork Trinity sediment TMDL completed December 1998 by USEPA. The TMDL for sediment on the mainstem Trinity was due May 2001.

Appendix 2.6-A

Partial list of agencies and groups with jurisdiction and/or interest in water quality in the Trinity River WMA.

United States
- Trinity River Basin Fisheries Task Force
- Bureau of Reclamation
- Forest Service
- Bureau of Land Management
- Environmental Protection Agency, Regions IX & X
- Army Corps of Engineers
- Geological Survey
- National Biological Service
- Fish and Wildlife Service
- National Marine Fisheries Service
- Natural Resources Conservation Service

Native American
- Hoopa Tribe
- Yurok Tribe
- Karuk Tribe

California State
- Department of Fish and Game
- Department of Health Services
- Department of Pesticide Regulation
- Office of Environmental Health and Hazard Assessment
- Department of Toxic Substance Control
- Department of Water Resources
- California Coastal Conservancy
- UC Agricultural Extension

County and Local Agencies
- Trinity County Resource Conservation District
- County Agricultural Commissioners
- city planning departments
- city public works departments

Companies, Organizations, and Public Interest Groups
- American Fisheries Society, Humboldt Chapter
- Timberland owners
- Farm Bureaus
- South Fork Trinity River CRMP
- Friends of Trinity River
- Simpson Timber Company
- Sierra Pacific Lumber Company

Surface Water Monitoring Program

The Surface Water Monitoring Program (SWAMP) will rotate intensive surveys into the Trinity River WMA in FY 2001-02 where one permanent and five rotating sampling stations will be established. That information will be placed in this section when those locations and parameters are identified.